

The 19th Annual Scientific Meeting of the Malaysian Society of Pathologists was held at the Hotel Ayer Keroh d'Village, Malacca on 19-20 November 1994. Abstracts of the free paper communications follow:

Oral presentations:

1. Determination of reference value for local 'healthy' population and for unselected mixed hospital population.

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A study was conducted to determine reference value in local healthy population and possibility of deriving reference value from hospital based population using REFVALUE Software. A total of 902 venous samples were collected in Lithium heparin and EDTA tubes from healthy, male blood donor aged 18 to 55 year in UHKL between 8/2/93 to 10/4/93. The samples were processed and analysed as those for routine hospital population. A total of 2750 routine laboratory data from hospital based male population aged 18 to 55 year were collected. The Statistical package for Social Sciences software program was used to obtain reference value for blood donor by rank based nonparametric method and frequency distributions. The frequency distribution and class interval of each analytes for respective population were documented into the REFVALUE software to compute reference value. The result showed the value of upper limit for blood donor obtained by REFVALUE software were closer to that existing reference value, where as those obtained by non-parametric method is much influenced by the outlier. The value of lower limit however lower than the existing value except for albumin, creatinin and haemoglobin. Study also showed possibility of deriving reference value from mixed hospital population using REFVALUE software.

2. Phenotype of alpha-1-antitrypsin deficiency in Malaysia

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Alpha-1-antitrypsin (AAT) deficiency is one of the most lethal congenital diseases in Europe and the US with the incidence of 1 in 2000. Patients presented with either respiratory or liver problem. In 1989, we studied the incidence of this disease among prolonged jaundice babies admitted in Hospital Kuala Lumpur. About 30% of the patients studied were found to be AAT deficient, however the phenotype of them were not identified. Recently, we have established the method for phenotyping using a high resolution isoelectric focussing on an "ultra-thin polyacrylamide gel embedded with narrow range pI pharmalyte, which were further confirmed with immunofixation and Polymerase Chain Reaction method for the rarer phenotype. Out of 950 samples studied, 139 (14.6%) of them have serum of AAT less than 2.00 g/l. The phenotyping were 95 (68.3%) were PiM?, 16 (11.5%) were PiS/SS and 8 (5.8%) were PiF/FF. The other 20 (14.4%) were PiZ with 10 PiZZ and another 10 PiZS. Their average level of A1AT were 1.71 g/l, 1.53 g/l, 1.40 g/l, 1.32 g/l and 1.20 g/l for PiM, PiS/SS, PiF/FF, PiZS and PiZZ respectively. Except for a slight increased level in PiZZ subjects, the other average level of A1AT in the above various phenotype were comparable with other studies. Patients with PiZ/ZZ were presented with jaundice (11), lung diseases (3), chronic renal failure and 5 were accidental finding.

3. Antinuclear, anti-mitochondrial, anti-smooth muscle and anti-parietal cell antibodies in a healthy Malaysian population

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A study of 101 sera of 69 Malay, 14 Chinese and 18 Indian healthy adult Malaysians was undertaken to determine the frequency of anti-nuclear (ANA), anti-mitochondrial (AMA), anti-smooth muscle (SMA) and anti-parietal cell (APC) antibodies. There were 67 females and 34 males with a mean age of 31.7 years (+/-8.6). ANA was assayed by IIF using both mouse liver and HEp2 cell substrates. AMA,

SMA and APC were also tested by IIF using composite section from mouse liver, kidney and stomach substrates. Analysis showed 6.9% were positive for ANA at a titre of 1:40 with HEp2, while only 1.9% were detected using mouse liver. 9.9% had detectable AMA from titres 1:10 to 1:90. None of them had detectable SMA and only 1 (0.09%) had APC at a titre of 1:80. This study suggests that a diagnosis of an autoimmune disorder has to be cautiously made taking into consideration that autoantibodies are present in the healthy population though in low titres.

4. HPLC for confirming diagnosis of inborn errors of metabolism: a report of MSUD cases in Malaysia in 1993.

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High Performance Liquid Chromatography (HPLC) method with phenylisothiocyanate is recently used for confirming the diagnosis of inborn errors of metabolism (IBEM) especially amino acid disorders in Malaysian children. The samples are obtained from cases suspected of inborn errors of metabolism, especially of amino acid disorders, which are detected clinically by paediatricians. Either urine or serum samples received are run on one-dimensional thin layer chromatography and supplementary chemical tests to detect the abnormal bands and associated abnormalities. Positive samples are further run on High Performance Liquid Chromatography to determine the specific amino acids abnormality. With the success of developing the confirmatory technique for amino acid disorders using High Performance Liquid Chromatography, we have examined 404 samples from all over the country in 1993. Each specimen with abnormal findings from screening tests by one-dimensional thin layer chromatography is confirmed using HPLC technique. Out of that 41% have generalised aminoacidurias and 4.2% or 17 cases have Maple Syrup Urine Disease (MSUD). Patients are aged between 11 days to 6 years old. Most of them are Malay (10) and male to female ratio is about 1:1. Most of these cases presented with history suggestive of MSUD. With this preliminary findings, further studies will be carried out in order to have an investigation and management protocol for the disease and more importantly to formulate a strategy of inborn errors of metabolism screening for the country.

5. Phagocyte chemiluminescence in HIV positive subjects

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Fifteen HIV infected patients were studied for their phagocyte function in vitro, in comparison with fifteen normal healthy persons. Chemiluminescence was measured using whole blood by means of a microtitre plate chemiluminometer. Peak values and total integral values were recorded. The patients had a normal lymphocyte count (mean = $2,185 \times 10^6/l$) but a more intense chemiluminescence than the controls. This was demonstrated by the double peak values and total integral values. The observed enhanced phagocyte activity may reflect an early failure of T cell regulatory functions or a compensatory mechanism in response to the underlying immunodeficiency.

6. α - β interaction in β -thalassaemia traits

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a-thalassaemia and P-thalassaemia are both common inherited disorders in Malaysia. Thus, it is expected that coexistence of a- and P-thalassaemia in an individual can occur. The aim of this study is to demonstrate that α - β interaction occurs and hence determine its prevalence.

52 cases of β -thalassaemia traits from the Faculty of Medicine, UKM were analysed for presence of a-gene deletion by technique of Southern Blot using restriction enzymes (Bam HI and Eco RI) and

hybridization with radioactive P³²-labelled alpha and zeta probes. Haematological indices, haemoglobin electrophoresis and quantitation of Hb A₂ and Hb F were also done.

11 cases (21%) demonstrate α -gene deletion, with 8 cases showing α -thalassaemia genotype ($\alpha\alpha/--$) and 3 cases showing α ²-thalassaemia genotype ($\alpha\alpha$ a⁻ a⁻). From this study we conclude that α - β interaction occurs, and the prevalence rate is 21%. More cases should be studied to reflect the true prevalence rate.

7. Coagulation services in hospitals in Malaysia - the present status

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Questionnaires were sent to 18 main hospitals throughout Malaysia to determine the status of coagulation services in the country. These included 3 University Hospitals, the Referral Hospital Kuala Lumpur, all the state Major Hospitals (except 2) and 3 District Hospitals. The data analysed indicate that all the hospitals provide screening test for bleeders, however, only 44.4% carry out coagulation factor assays. The most common factor assayed is factor VIII (87.5%). DIC screening is available in 88.9% of hospitals with 44.4% giving a 24 hour service. Tests for presence of inhibitors mostly factor VIII inhibitors is done in 44.4% of the hospitals surveyed. A total of 33.3% of the hospitals do thrombosis screening, lupus anticoagulant detection being the most common while only 33.3% of these hospitals assay for Protein S. All the main hospitals have a Blood Transfusion Service which provides treatment for Haemophilias. However, only 27.8% have a dedicated clinic for Haemophilia. Clinicians indicating interest in coagulation are found in 61.1% of the hospitals evaluated. Coagulation services in hospitals in Malaysia have improved over the years, however, there is still a need to make available a wider range of tests in line with the diversity of bleeding as well as thrombotic disorders treated.

8. Autosomal dominant thrombocytopenia: a family study

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A family demonstrating autosomal dominant thrombocytopenia is described. A 28-year old Malay housewife was found to have a platelet count of $40 \times 10^9/l$ while being investigated prior to ovarian cystectomy. There was a history of intermittent petechial rash and easy bruising over many years. Other blood counts were normal, as were the white cell and platelet morphology, and a coagulation profile. The bleeding time was more than 30 minutes. A bone marrow was normal except for a slight increase in megakaryocytes with a preponderance of low ploidy forms. A diagnosis of immunothrombocytopenia (IPT) was made, but she failed to respond to prednisolone or vincristine therapy. A careful family study showed that 5 out of 8 siblings, one parent and one nephew had easy bruising and platelet counts of $39-82 \times 10^9/l$. This is most easily explained by autosomal dominant inheritance. Anti-platelet antibodies were not detected in the serum of the propositus (ImmuCOR solid phase test, courtesy of Dr Yasmin Ayob, Blood Services Centre, Kuala Lumpur). Platelet aggregation studies excluded a major functional defect. An ovarian cystectomy was performed uneventfully after transfusion of allogeneic platelets, whose survival in her circulation was normal. The patient has remained well since the operation with a platelet count around $40 \times 10^9/l$. Familial thrombocytopenias are rare, but important to differentiate from the common acquired causes of thrombocytopenia such as IPT, in order to spare the patient unnecessary treatments. Detection and counselling of affected family members is important.

9. Polycythaemia - the IMR experience

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We present 3 cases of polycythaemia in a Malay, Chinese and Indian males, who presented with typical haematologic and clinical features of the disease. The Malay patient diagnosed as polycythaemia rubra vera had a splenomegaly (3fb). His total blood volume and red cell mass were markedly raised with normal plasma volume. Bone marrow showed a myeloproliferative disorder. The leucocyte alkaline

phosphatase was increased confirming apolycythaemia rubra vera. There was an increase in serum uric acid and serum vitamin B12 levels. He was put on myelosuppressive therapy and venesection. The Chinese patient, diagnosed as an Eisenmenger Syndrome due to ventricular septal defect by Hammersmith Hospital, was found to have a secondary polycythaemia. His blood viscosity was very high (22.6 cps). The Indian patient, a chronic smoker, was diagnosed as a stress polycythaemia (Gaisbock's Syndrome). He had skin lesions and was hypertensive. Whole blood viscosity was increased. RBC count, haemoglobin and haematocrit levels were elevated in all three patients. They are only on simple intermittent venesections at the moment and have all been relatively active and symptoms free with this treatment.

10. Parasitic infections among Orang Asli community in Pangsun, Ulu Langat

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This study was conducted at the Orang Asli village of Pangsun, Ulu Langat with main objective of determining the prevalence of parasitic infections among them. Stool samples were collected and processed for direct smear, Trichrome stained smear, Modified Ziehl Nielsen staining and the Harada Mori culture.

High prevalence of parasitic infections was noted among Orang Asli population in Pangsun, Ulu Langat with 82.39% of them being infected with at least one parasite, either helminth or a protozoa.

Soil-transmitted helminths were highly prevalent especially with multiple infections and these account for 42.76% whereas single infection occurred in 27.67% of the population. In this study all age groups were affected except those under one year of age and this could be due to the small sample size. No significant correlation was seen between the prevalence of soil-transmitted helminth and sex.

Among the protozoas, *Cryptosporidium* was the most prevalent in the community soil-transmitted helminth and sex.

Among the protozoas, *Cryptosporidium* was the most prevalent in the community with 20.13%, followed by *Entamoeba coli* with 15.72%, then *Blastocystis hominis* with 8.18% and *Giardia intestinalis* and *Entamoeba histolytica* each with 6.92%. Prevalence of cryptosporidiosis was highest among the preschool children with 30.77% and 35.29% respectively. They were all asymptomatic.

11. Lymphoproliferative responses to *Mycobacterium leprae* in healthy family contacts of leprosy patients

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The lymphoproliferative responses to *M. leprae* were studied in healthy family contacts of leprosy patients. All 25 contacts, from 5 families, responded positively to *M. leprae* in this assay. These lymphoproliferative responses were analysed further to study the responding cells and the eliciting antigens. The results appear to indicate that the responding cells in healthy contacts consist predominantly of alpha-beta T cells. In addition, the responding cells consist of roughly equal percentages of CD4 and CD8 T cells. It would also appear that most healthy contacts respond to the 65kDa protein antigen, while most patients respond to the 18kDa protein antigen of *M. leprae*.

12. Prevalence of β -amyloid deposition in normal aging non-demented brains in a Malaysian population

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It is well known that β -amyloid is pathologically accumulated in the brains of patients with Alzheimer's disease. In addition, β -amyloid is also present in the non-demented normal aging brain in smaller quantities. In this study, we attempted to establish the prevalence of P-amyloid deposition in non-demented subjects according to age, sex and ethnic group. 200 consecutive retrospective autopsy cases

from the year 1993 backwards, whose causes of death were unrelated to dementia or mental retardation and who were 40 years of age and above, were obtained from the department files. Sections of the brain were screened with alkaline Congo red for amyloid and positive cases were stained by a standard immunoperoxidase method for P-amyloid. The results were then tabulated according to age, sex and ethnic groups and analysed. β -amyloid deposition was observed only in individuals above the age 50 years, at the rate of 2.0% (1 positive case/49 cases screened) in the 50-59 years age group, 5.3% (2/38) in the 60-69 years age group, 6.7% (11/15) in the 70-79 years age group and 38.5% (51/118) in the 80-89 years age group. There appears to be an increased prevalence of P-amyloid deposition in the brain with increasing age but we could not conclude any significant differences according to sex or ethnic groups. The formation and pathogenesis of β -amyloid in the brain will be briefly reviewed.

13. Pap Smears: a Kelantan experience. Is it an effective screening method for cervical cancers?

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A total of 4533 Pap smears were examined in the Pathology departments of Hospital Universiti Sains Malaysia (HUSM) and Hospital Kota Bahru (HKB) over a period of one year from January 1993 to December 1993. Of these 92.6% (4198/4533) smears were done as a screening procedure or on clinically suspected cervical lesions while the remainder were for non-cervical pathology. 49.2% (2229/4533) of the smears were found to be adequate in sampling while the majority 50.8% (2304/4533) were inadequate. Only 2.2% (94/4198) of the smears were found to have either cervical intra epithelial neoplasia (CIN) or invasive carcinomatous changes.

This study provokes the issue that there is a definite deficiency in knowledge of the proper Pap smear sampling technique. The guidelines of sampling as well as cytological findings in interpreting Pap Smear are discussed.

14. Cytology of Ki 1 lymphoma

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Ki 1 lymphoma, one of the more recently described pleomorphic types of lymphoma, affects mostly children and adolescents and is sometimes mistaken for carcinoma or sarcoma. This is a report of two cases of Ki 1 lymphoma diagnosed on cytology, occurring in an adolescent and elderly male respectively. While the former presented with generalised lymphadenopathy and involvement of skin and subcutis, the latter was admitted with pneumonia and multiple subcutaneous masses in the anterior and posterior chest wall. Fine needle aspiration cytologic smears in both cases showed a polymorphous population of dissociated cells with abundant lightly basophilic vacuolated cytoplasm and oval, round or lobulated nuclei. Binucleate and trinucleate cells and blastoid cells were also seen and the mitotic activity was very high. Particularly characteristic was the presence of multinucleate cells with wreath-like arrangement of nuclei. Most of the tumour cells expressed immunocytochemical reactivity to Ki 1 antibody and a cytologic diagnosis of Ki 1 lymphoma was given. Trucut biopsy of the chest wall tumour in one case and review of lymph node biopsy done one year ago in the other enabled cytohistologic correlation in both cases.

15. Spectrum of Histiocytosis Syndrome in Hospital Universiti Sains Malaysia - a review of 29 cases

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Between March 1984 and September 1994, by examining the histopathological records of Hospital Universiti Sains Malaysia, 29 patients were found to have various types of histiocytoses. We

investigated their clinical presentations, laboratory findings and outcome. Age range was between 3 months to 84 years. The male:female ratio was 1.2: 1. Mass or swelling was the most common symptom (62%) followed by fever (41%) and weight loss (28%). Pallor was the most common sign (28%) followed by lymphadenopathy (24%) and hepatosplenomegaly (24%). Class II macrophagocytic non Langerhans cell histiocytosis was the most common type with 17 cases due to haemophagocytic syndrome and 1 case due to benign fibrous histiocytoma. There were 6 cases with underlying carcinoma. Five cases were due to ? infection, 2 cases due to collagen disease, 1 case with choledochal cyst, 1 case with non Hodgkin's lymphoma and 2 cases unknown. Class II Langerhans cell histiocytosis was the next commonest type. Five cases were due to eosinophilic granuloma and one patient had cutaneous histiocytosis. Five patients were classified as having Class III malignant histiocytoses - 2 patients had malignant histiocytosis and 3 patients had malignant fibrous histiocytoma. Preliminary outcome after receiving appropriate treatment was that 27 out of 29 patients were discharged well. However, defaulting rate for subsequent follow-up was high (50%). Thus it would be difficult to correlate the underlying conditions and survival. Paucity of established research in this area makes it difficult to settle the nosology on this subject without dispute. More research needs to be done in this area and the resulting findings explored.

16. Skin adnexal neoplasms - a histopathologic study

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A review of tumours of skin received by the Department of Pathology, University Hospital, Kuala Lumpur from January 1980 to December 1992 was undertaken to establish the pattern of occurrence of adnexal neoplasms. There were 112 cases of adnexal tumours. The age range of patients was 19 to 84 years with a mean age of 29.8 years. In 105 cases (93.7%), the tumour was solitary. Majority of the tumours (92%) were less than 2 cm in size. The common sites of involvement were the head and neck (59%) and extremities. 93% of tumours were benign. 63.4% of tumours were of hair follicle origin. Intratumour deposition of amyloid was observed in one case of trichoepithelioma.

17. Acinic cell carcinoma of the salivary glands: report of two cases

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Two cases of acinic cell carcinoma of the parotid glands are presented. The first case is a 10 year old girl presenting with painless enlarging mass of the right parotid gland of two months duration. A tumour was removed from the same gland one year earlier in a private clinic. She underwent a right total parotidectomy, and operative findings showed lobulated mass in the superior lobe. There was no facial nerve involvement. The second case is a 36 year old man presenting with painless enlarging tumour of the right parotid gland of six months duration. Preoperatively it was diagnosed as a case of pleomorphic adenoma. He underwent a right superficial parotidectomy. Operative findings showed a 4 cm by 3 cm tumour in the superficial lobe. Postoperatively he was given radiotherapy. Histological features of the resected tumours showed foci of tumour masses composed of large cells with abundant granular basophilic cytoplasm resembling normal serous acinar cells, with associated lymphoid cells in the stroma in the first case. In the second case, the tumour is encapsulated, composed of tumour cells with granular basophilic to amphophilic cytoplasm with evidence of capsular invasion.

These two cases highlight the common clinical and histological features of this uncommon tumour in children and in adults.

18. Ki-1 positive anaplastic large cell lymphoma presenting as a lytic bone lesion

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A 14-year, old Malay boy presented with two months of pain in the right hip accompanied by fever, loss of appetite and loss of weight. On examination a large vague immobile soft mass was palpable in the right groin. Shotty lymphadenopathy in the neck and hepatosplenomegaly was noted. Radiological studies showed a large lytic mass lesion in the right ilium, an intra-abdominal lymphadenopathy and widening of the cardiac shadows suggestive of hilar lymphadenopathy.

Open biopsy of the lytic lesion showed a homogenous tan soft tumour within and destroying the iliac bone. Histopathological examination showed tumour tissue composed of large round cells with cleaved nuclei and abundant cytoplasm. Immunohistochemistry showed positivity for LCA, UCHL, EMA and Ki-1 cell markers. The patient showed good response to CHOP regime chemotherapy.

Poster presentations:

P1. The fancies and the fallacies of specimen collections. The need to break bad habits

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With the increasing numbers of specimens received by any pathology laboratories in the country and the in advertent carelessness and disregard on proper specimen collections and handlings, the managerial cost of running laboratories has risen many fold. Therefore a need to educate those concerned (medical personnel) is long overdue.

This article highlights the age-old fancies and the fallacies of specimen collection and giveS guidelines on how to properly collect them. The specimens discussed include sputum, urine, cerebrospinal fluid (CSF), body effusions, Pap smear, fine needle aspiration cytology (FNAC) and endoscopic biopsy. If these guidelines are adhered to a lot more meaningful results can be attached to each specimen, less repetition of tests are required and definitely a reduction in laboratory expenses are expected.

P2. A survey on transport of diagnostic specimens to Ministry of Health laboratories

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A survey was conducted to evaluate the packaging and transportation of diagnostic specimens to Ministry of Health Laboratories. Questionnaires were sent to 115 Government laboratories. Eighty-eight completed forms were returned and analysed. Hospital laboratories received most (60.9%) of the specimens. The rest were sent to IMR (25.8%) and other laboratories. Blood accounted for 52.3% of the specimens transported. The specimens were transported by ambulance (60.5% of specimens), by air (9.7%), train (6.6%) and various other modes of transport. The primary specimen containers used were plastic (62.3%) or glass (35.9%). 23.3% of specimens were transported without a secondary container. The plastic bag was the commonest type of secondary container used (53.5%). 52.5% of specimens were transported without a dispatch container (i.e., in secondary container alone). Padding with absorbent material was seldom used. Biohazard labels were used for 11% of specimens. About 23.6% of dispatch containers did not have the destination displayed on them. Of the total specimens received, the laboratories reported 2.9% spillages and 1.5% breakages. Labels were missing for 3.4% of specimens. 8.7% of labels were not adequately filled. 36% of request forms were placed in contact with the primary container resulting in soiled forms (4.8% of forms). 3.4% of specimens did not have an accompanying request form. Our survey revealed that there are several aspects of specimen transport that should be improved on.

P3. Detection of Cells Containing Cytoplasmic Immunoglobulin in Bone Marrow*ZAWIAH Ahmad and ZAKIAH Ismail**Division of Biochemistry, Institute for Medical Research, Jalan Pahang, 50588 Kuala Lumpur*

The aim of this study is to compare staining methods in the detection of cells containing cytoplasmic immunoglobulin in bone marrow of myeloma patients. The stains used were May-Grunwald stain and fluorescein isothiocyanate (FITC) conjugate antisera to human immunoglobulins. The methods used for separating the plasma cells from other cells of the bone marrow were also compared. The FITC conjugated antisera produced confirmatory results since it specifically binds the cytoplasmic immunoglobulin in the cells. It was found that separation of the cells using ficoll gave a better cell count compared to the method using microhaematocrit tubes.

P4. Malignant rhabdoid tumour arising in the oral cavity*PL CHEAH, *KH NG and **CH SIAR**Department of Pathology, Faculty of Medicine, University of Malaya, *Institute for Medical Research, Kuala Lumpur and **Department of Oral Pathology, Faculty of Dentistry, University of Malaya.*

Malignant rhabdoid tumour is a rare lethal tumour, first described in the kidneys of children and recognised as an entity distinct from Wilms' tumour in 1978. Since, tumours with similar histological, immunohistochemical and ultrastructural features have also been described in several extrarenal sites. We describe a case with classical histopathological features arising in the oral cavity of a 53-year-old Malay male. Apart from being the first case of this rare condition occurring in the oral cavity to be described in a Malaysian, this case also reiterates the importance of considering this rare diagnosis in sites outside the kidney.

P5. Human papillomavirus in juvenile laryngeal papillomatosis: a University Hospital experience*PL CHEAH and LM LOOI**Department of Pathology, Faculty of Medicine, University of Malaya, 59100 Kuala Lumpur.*

Juvenile laryngeal papillomatosis is the most common laryngeal tumour in childhood and is known for its recurrent clinical course. In recent years, a close aetiological relationship has been identified with certain types of the human papillomavirus (HPV). A study was conducted at the Department of Pathology, University of Malaya Medical Centre to assess the prevalence of human papillomavirus in juvenile laryngeal papilloma. 17 cases were diagnosed between January 1983 and December 1991. Of these, 10 were males and 7 females. There were 14 Chinese, 1 Indian, 1 Malay and 1 Eurasian. 16 of these cases were studied for HPV types 6 and 11 using the polymerase chain reaction amplification system on archival formalin-fixed, paraffin-embedded tissue. 10 (62.5%) cases were positive for HPV; 8 were positive for HPV 11 and 2 for HPV 6. The lower prevalence of HPV detected in the cases of juvenile laryngeal papillomatosis studied compared with those observed by other workers may be due to a true lower prevalence of HPV infection in juvenile laryngeal papillomatosis of Malaysian children, the involvement of other types of HPV not tested for in this study or the difficulty in retrieval of HPV DNA from archival formalin-fixed, paraffin-embedded tissue.

P6. Liver changes in thalassaemia and outcome of bone marrow transplantation*Lai Meng LOOI, Phaik Leng CHEAH and *Hai Peng LIN.**Departments of Pathology and *Paediatrics, Faculty of Medicine, University of Malaya, 59100 Kuala Lumpur.*

It is known that the results of bone marrow transplantation (BMT) for thalassaemia are poorer in those with liver damage as evidenced by the presence of liver fibrosis and/or iron overload. During the period 1987 to 1993, liver biopsy assessment was carried out on 11 children with beta-thalassaemia major who subsequently underwent BMT at the University Hospital, Kuala Lumpur. The liver parameters assessed histologically were (a) siderosis (b) fibrosis, and (c) inflammation. The patients were then categorised

accordingly as showing Class I (no fibrosis or siderosis), Class II (either fibrosis or siderosis) or Class III (both fibrosis and siderosis) liver changes.

The ages of subjects ranged from 2 to 9 years with a mean of 4 years. 9 were male and 2 female. 6 were Chinese, 4 Malay and 1 Indian. 6 were assessed as having Class II liver changes and 5 showed Class III changes. There were no patients with Class I changes.

One patient (Class II) died of post-BMT complications. All the rest were successfully treated with BMT: 6 (4 Class II, 2 Class III) were cured after one BMT while 4 (1 Class II, 3 Class III) rejected the first graft but were cured after a second BMT.

The presence of Class III liver changes does not preclude successful BMT treatment for beta-thalassaemia major. However, the risk of graft rejection was higher and a different conditioning regime may be required.

W . Fine needle aspiration cytology (FNAC) - an easier and a faster diagnostic tool for investigation of tuberculosis. Will it supercede microbiological examination?

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The Hospital Universiti Sains Malaysia (HUSM) recorded 860 cases of tuberculosis from the year 1989 to 1993, of which 18 (21.2%) have died. 82 of these cases were diagnosed by fine needle aspiration cytology (FNAC). Most (91.5%) of the presenting complaint were lymphadenitis. Only 64% was clinically suspected as tuberculosis. The cytologic criteria used were presence of epithelioid granuloma, necrotic debris with or without tuberculosis bacilli demonstrable by Ziehl Neelson stain. 85.4% were found to have granuloma in the smear. 21.2% had acid fast bacilli. All the cases responded to antituberculous treatment.

We propose that FNAC is an easier and a faster investigative tool and if properly conducted it may supercede the conventional microbiological investigation in the future.

P8. Isolation of ferritins from the spleen of a patient with thalassaemia major

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Measurement of serum ferritin is a reliable non-invasive means to assess total body iron stores. In order to develop an in-house immunoassay, relatively pure ferritins need to be isolated from human tissue. We obtained the spleen from a patient with thalassaemia major who had undergone splenectomy. The human spleen was first homogenised and crude ferritins were extracted using ammonium sulphate precipitation. The resultant extract was then purified with ultracentrifugation followed by gel filtration with Sepharose 6B. Polyacrylamide gel electrophoresis was carried out on the filtrate along with high molecular weight markers. We found that the isolates were relatively pure and have a molecular weight of about 450,000 KD. The isolated ferritins were used as immunogens to raise antibodies in the rabbit for the immunoassay.

P9. Isolation of human surfactant protein A from amniotic fluid

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Surfactant Protein A (SPA) is one of the four known surfactant-associated proteins found in human lungs. It plays a major role in determining regulation of surfactant uptake and resecretion. Qualitative and quantitative deficiencies of SPA may contribute to neonatal distress syndrome. The measurement of its level in amniotic fluid or neonatal tracheal aspirate may be useful to assist in the replacement therapy using natural or synthetic surfactant. In order to develop an in-house immunoassay to detect the level of SPA, we experimented with a discontinuous sucrose density gradient to isolate SPA from amniotic fluid. Polyacrylamide gel electrophoresis was carried out on the isolates with low molecular

weight markers. The isolates were found to be relatively pure and have a molecular weight of about 35 KD. The isolated SPA will be used as immunogen to raise antibodies in the rabbit for the immunoassay.

P10. Meningeal involvement in a case of multiple myeloma

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There are various neurologic complications in multiple myeloma and the most frequent is spinal cord compression. Other causes of neurologic dysfunction are hypercalcaemia, hyperviscosity syndrome, intracranial plasmacytoma and meningeal involvement. Meningeal involvement in multiple myeloma is a rare occurrence. We report a case of multiple myeloma with meningeal infiltration as determined by electrophoresis of cerebrospinal fluid.

SM, a 60-year old Indian man presented with bone pains and swellings over the scalp of the frontal head and right supraclavicular region of 10 months duration, was diagnosed to have multiple myeloma based on plasmacytosis in the bone marrow aspirate, paraproteinaemia and radiological findings of lytic lesions of the skull. He was treated with melphalan and prednisolone and had peritoneal dialysis for hypercalcaemia and acute renal failure. Three weeks after the first course of treatment, he was admitted for drowsiness. His hypercalcaemia and uraemia had improved then. Neurological examination showed moderate stiffness of the neck and upper limbs. There was no facial asymmetry and no papilloedema. His reflexes were generally depressed. Meningeal infiltration by myeloma was diagnosed and confirmed by cerebrospinal fluid electrophoresis. The patient was referred for radiotherapy but succumbed to septicaemia.

P11. Detection of mutation NT 1376 (G-T) in the G6PD gene of Malaysian Chinese G6PD deficient patients

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We performed a PCR-based method suggested by Chang et al to detect the molecular defect nt 1376 (G-T) of the G6PD gene in 8 Malaysian Chinese G6PD deficient males and 8 normal male individuals. This method involved the selective amplification of the exon 12 DNA fragment from human G6PD gene by using specific oligoprimers followed by digestion with the restriction enzyme Xho I that recognizes an artificially created restriction site. Exon 12 was successfully amplified in all cases by modifying the amplification cycle temperatures calculated according to T_m of primers (94° 1 min, 57° 1 min, 72° 1 min followed by 10 mins extension at 72°) for a total of 30 cycles and using concentrations of MgCl₂, primers and dNTP of 1.5 mmol/l, 1 μmol/l and 200 μmol/l respectively. 6 out of the 8 Chinese G6PD deficient samples and none of the 8 normal control were positive for the mutation. We found that this method was rapid and simple in detecting the G6PD mutation nt 1376 (G-T), a mutation which has been shown to be common among Taiwanese Chinese (50%). It appears to occur in 75% of our Chinese G6PD deficient individuals studied.

P.12. Angio-immunoblastic lymphadenopathy (AILD) - a case report

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AILD is a rare systemic lymphoproliferative disorder characterised by severe constitutional symptoms and clinical features resembling malignant lymphoma. Histologically, involved lymph nodes (LN) show an obliteration of normal LN architecture by polymorphic cellular infiltrate together with a proliferation of arborizing small blood vessels. Autoimmune hemolytic anaemia and polyclonal hypergammaglobulinemia may be present. The clinical course in some patients remains indolent, while in the majority an aggressive clinical course of evolution into lymphoma is reported. We report a case of AILD.

MN, a 60-year old Malay man presented with fever, generalised rashes, loss of appetite and weight, and bilateral pedal edema. Physical examination showed that he was pale and cachectic. There were generalised macular rashes, lymphadenopathy and hepatosplenomegaly. Initial FBP investigations revealed anaemia and thrombocytopenia. Blood urea and ESR were elevated. Hypoproteinemia and hypoalbuminemia were present. LN biopsy was consistent with AILD. The patient developed septicemia and succumbed to severe gastrointestinal bleed which was part of disseminated intravascular coagulopathy.

P13. Fine needle aspiration cytology - HUSM experience January 1988 - 1994

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From January 1988 to May 1994, a total of 1174 FNA were conducted in Hospital Universiti Sains Malaysia, Kelantan. Of these, 433 (36.9%) was for thyroid lesions, 278 (23.7%) for lymph nodes, 239 (20.3%) for breasts, 67 (5.7%) for liver, 27 (2.3%) for salivary, 39 (3.3%) for intraabdominal, 13 (1.1%) for pulmonary and 78 (6.6%) for miscellaneous lesions. All except the intraabdominal and the pulmonary lesions, the aspirations were conducted by pathologists. The intraabdominal and the pulmonary lesions were aspirated by radiologists under ultrasound/fluoroscopy guidance. The failure rate was 9.2% (108/1174) due to inadequate material obtained for cytological examination. 396 (37.1%) of the adequate aspirations confirmed malignancy while the rest were for benign or non-neoplastic lesions.

P14. Increased T cell percentage is associated with declining absolute numbers of CD4 cells in HIV seropositive patients.

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A cross-sectional study on the expression of six lymphocyte markers was carried out on 481 HIV patients and 79 normals after stratification based on absolute CD4 counts. The data was stratified according to the following groups ($\times 10^6$ CD4 cells per mm^3): I: 1,201 - 1,600, II: 801 - 1,200, III: 401 - 800 and IV: 0 - 400. The mean percentages of the subsets before stratification showed that HIV patients had increased percentages of CD3+ (75.7 vs 66.9), CD3+CD8+ (52.2 vs 32.3) and CD3+HLA-DR+ (36.1 vs 14.4) cells and lower percentages of CD19 (10.3 vs 13.3) and NK (13.7 vs 20.4) cells when compared to controls in the same group. A definite trend however, was only seen in CD3+CD8+ (47.4, 50.0, 54.0, 57.5 for groups I, II, III and IV respectively) and CD3+HLA-DR+ (29.1, 32.9, 38.4, 43.9 for groups I, II, III and IV respectively).

P15. Patch test - a simple in vivo investigation for contact dermatitis

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The aims of the study is to evaluate the epidemiology of the various allergens amongst the contact dermatitis patients.

A simple in vivo patch test (TROLAB, Hermal German) was done on 56 cases of contact dermatitis in remission. The test series consist of 24 types of common allergens. The incidence of allergy reaction for at least one allergen is 46% amongst the cases. Nickel (21%), Cetavlon (12%), and Fragrance mix (10%) were the commonest allergens. Cetavlon was the commonest irritant reagent. Most of the allergens caused allergy reaction were relevant and patients had frequent contact. 10 of the 56 cases (39%) tested with raw materials showed allergy reaction and 2 cases had irritant reaction.

Patch Test is a useful simple in vivo approach for contact dermatitis to elicit the relevant allergens, then to have a better management.

P16. Adrenal cytomegaly associated with diaphragmatic hernia: report of a case

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A very rare case of a 22-weeks old foetus with unilateral adrenal cytomegaly and left diaphragmatic hernia is presented. The foetus which died in-utero, had large bizarre cells in the foetal cortex of the right adrenal gland. These cells had large, pleomorphic, hyperchromatic nuclei and abundant cytoplasm. The left adrenal was normal. There was no stigmata of Beckwith-Wiedemann syndrome. The association of adrenal cytomegaly with various congenital malformations, the significance and possible pathogenesis of this condition are discussed.

P17. Haemophilus influenzae infections of the female genital tract

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The prevalence of *Haemophilus influenzae* in the female genital tract was studied over a 5-year period from 1989 to 1994. During the same period, all eye swabs from infants up to 6 months old were cultured for *H. influenzae* to determine the extent of transmission of this organism from mother to baby. All isolates of *Haemophilus* on chocolate agar were identified by requirements for X and V factors. They were biotyped using Kilian's scheme, serotyped using commercial antisera and their antibiograms were studied using the disc diffusion method. Production of β lactamase was tested using a chromogenic cephalosporin (Nitrocefim). *Haemophilus influenzae* was isolated from 51 vaginal swabs and 30 eye swabs. Biotypes 2 and 3 were the most commonly encountered, and most of the strains did not belong to the serotype 'b'. Ampicillin resistance was found in 11.6% of these isolates; all of these were β lactamase producers. The likelihood of *H. influenzae* being pathogenic in these cases is high in view of its primary isolation in large numbers, repeated isolation from 7 patients and the absence of other known pathogens in these specimens. Twenty of the isolates were from prepubertal girls, only one of whom gave a history of sexual abuse. Mother to child transmission was demonstrated on 2 occasions when isolates of the same biotype, serotype and antibiogram were isolated from both mother and child. The epidemiology and pathogenesis of *H. influenzae* genital tract infection require further investigation.